



September 17, 1999

Federal Express

Mr. Eric Wilson
Cornell-Dubilier Electronics Site On-Scene Coordinator
U.S. Environmental Protection Agency
2890 Woodbridge Avenue
Bldg. 209 (MS-211)
Edison, New Jersey 08837

Re: Cornell-Dubilier Electronics Site - Administrative Order on Consent for Removal
Action, Index No. II-CERCLA-99-2006
Verification Sampling Results

Dear Mr. Wilson:

On behalf of Respondent Cornell Dubilier Electronics, Inc. (CDE) and Dana Corporation (Dana), ENVIRON Corporation (ENVIRON) is providing the final project drawings issued for implementing excavation and restoration activities at the residential properties specified in the above-referenced Administrative Order on Consent (AOC). The excavation limits presented on the enclosed drawings are based on the statistical analysis conducted in accordance with the methodology presented in the approved *Revised Residential Property Removal Action Work Plan, South Plainfield, New Jersey* (Revised Work Plan), taking into consideration the results of additional characterization and supplemental verification sampling conducted subsequent to the submittal of the Revised Work Plan. Note that in order to expedite the preparation of these drawings for implementation, it was necessary to use draft analytical data for the statistical analysis.

We have enclosed the following for your information:

- Two sets of project drawings as issued for implementation (Plate Nos. 1 through 16).
- A table summarizing the results of sampling conducted on August 3 and September 3, 1999 (Table 1). A summary of the previously collected verification data (Table 2-1 from the Revised Work Plan) is also enclosed.
- Results of the statistical data assessment performed using the additional draft (unvalidated) results for (1) shallow soil samples (Table 2) and (2) all soil samples (Table 3).

Note that the following issues were identified during the assessment of data for Property AA:

- The sample bottle for sample CDAA018 collected in the gravel parking lot area on September 3, 1999 was broken during shipping. This sample will be recollected during the week of September 20, 1999.
- The initial results for Sample CDAA016 collected in the gravel driveway on August 3, 1999 indicated the presence of Aroclor 1242 at 51 mg/kg and Aroclor 1254 at 22 mg/kg. Because Aroclor 1242 was not detected in other characterization or verification soil samples, ENVIRON requested that this sample be reanalyzed. The reanalysis of this sample did not confirm the original results; the results for this second analysis indicated the presence of Aroclor 1254 (0.18 mg/kg) and Aroclor 1260 (0.046 mg/kg). Based on these significantly different results, the sample was analyzed a third time, with results similar to the second analysis (Aroclor 1254 at 0.15 mg/kg and Aroclor 1260 was not detected). The analytical laboratory, Quanterra, Inc., conducted an internal audit of analytical procedures, QA/QC and sample management procedures, and could not determine the cause of the discrepancy between the original result and the subsequent two results. Nonetheless, based on the results for the three analyses, ENVIRON believes that the results for two reanalyses best represent the PCB concentration for this sample location. Therefore, Table 1 reflects the average concentration for Aroclor 1254 and Aroclor 1260 using the results for these two analyses (identified as sample CDAA016 (RE)).

To further confirm these results, ENVIRON recollected a sample at location CDAA016 (Sample CDAA016B) on September 3, 1999. The results for this sample indicated the presence of Aroclor 1254 (0.33 mg/kg); Aroclor 1260 was reported as not detected. These results confirm the average concentrations reported on Table 1 for Sample CDA016. The results for Sample CDAA016B are also presented on Table 1.

Please call me or Mark Nielsen at (609) 452-9000 if you should have any questions regarding this submittal.

Sincerely,



Michael P. Scott
Principal

H:\Nielsen\02-5840D\5840d_54.doc

Enclosures

cc: M. Last, Esq. (w/o enclosures)
R. Sanoff, Esq. (w/o enclosures)
M. Sundram, USEPA (w/o enclosures)

Table 1 Summary of Additional Characterization and Supplemental Verification Sampling Data			
Property	Sample ID	Depth (inches)	Total PCB Concentration (mg/kg)
U	U-0A-02-DS-04	18-24	1.49
U	U-0A-02-DS-05-S	24-30	0.77
X	X-0A-05-DS-02	6-12	0.4775
X	X-0A-14-DS-02 (D)	6-12	0.232
AA	AA-0B-02-DS-01	0-6	2.375
AA	AA-0B-02-DS-01-S-FD	0-6	1.385
AA	CDAA012	0-6	1.055
AA	CDAA026	0-6	0.656
AA	CDAA017	0-6	0.564
AA	CDAA015	0-6	0.388
AA	CDAA013	0-6	0.387
AA	CDAA014	0-6	0.367
AA	CDAA016B	0-6	0.348
AA	CDAA022	0-6	0.3275
AA	CDAA027	0-6	0.2075
AA	CDAA016 (RE)	0-6	0.20175
AA	CDAA023 (D)	0-6	0.1575
AA	CDAA019	0-6	0.1375
AA	CDAA029 (D)	0-6	0.12525
AA	CDAA028	0-6	0.124
AA	CDAA024	0-6	0.0775
AA	CDAA020	0-6	0.035 U
AA	CDAA021	0-6	0.035 U
AA	CDAA025	0-6	0.035 U
BB	BB-0A-03-DS-01-S2	0-6	1.09
BB	BB-0A-03-DS-01-S	0-6	1.085
CC	CDCC024	0-6	1.06
CC	CC-0A-08-DS-01 (D)	0-6	0.49
CC	CDCC022	0-6	0.268
CC	CDCC023	0-6	0.1585
CC	CDCC021	0-6	0.115
CC	CC-0A-06-DS-01	0-6	0.11
CC	CDCC020	0-6	0.091
CC	CC-0A-07-DS-01	0-6	0.0815
CC	CDCC019	0-6	0.052
DD	DD-0A-05-DS-04	18-24	12.75
DD	DD-0A-05-DS-07-S	36-42	11.9
DD	DD-0A-01-DS-01-S	0-6	2.85
DD	DD-0A-05-DS-05-S	24-30	2.58
DD	DD-0A-05-DS-06-S	30-36	1.385
DD	DD-0B-03-DS-01	0-6	0.91 ✓
DD	DD-0B-02-DS-02	6-12	0.397 ✓
DD	DD-0B-01-DS-01	0-6	0.257 ✓
DD	DD-0A-01-DS-05-S2	24-30	0.1475 ✓
DD	DD-0A-05-DS-08-S ✓	42-48	0.093 ✓
DD	DD-0A-01-DS-07-S2	36-42	0.038 U ✓
DD	DD-0A-01-DS-06-S2	30-36	0.037 U ✓
DD	DD-0A-01-DS-04-S2	18-24	0.036 U ✓

Notes:

1. Total PCB concentration is the sum of the concentrations for Aroclor 1254 and 1260. For nondetect results 1/2 the detection limit was used to calculate the total.
2. Data are draft and are subject to validation
3. (D): The given value is an average of the sample and its field duplicate.
4. (RE): The given value is the average of the second and third reanalyses of the sample.

Table 2
Statistical Analysis of Existing Surface Soil Data

Property	Number of Samples, n, Used in the Statistical Analysis	Saphiro-Wilk Test for Normality	Function Distribution	Maximum Detected Concentration (mg/kg)	Mean Concentration (mg/kg)	Standard Deviation (mg/kg)	95% Upper Confidence Level of the Mean (mg/kg)
Characterization Sampling: Remove CDU0014, CDU010, CDU001&CDU020, CDU007, CDU006, CDU018, CDU009, CDU016, CDU008, CDU019, CDU013, CDU011, CDU015, CDU005, CDU012, CDU017, CDU002, CDU003							
U	1	0.08 0.41	NA NA	0.9	0.89	0.00	0.9
Verification Sampling: No shallow samples collected							
U	1	0.076 0.411	NA NA	0.9	0.89	0.00	0.9
Characterization Sampling: Remove CDW018, CDW021, CDW017, CDW010, CDW008, CDW004, CDW011, CDW005, CDW009, CDW013, CDW-001&CDW-022, CDW-016, CDW-012, CDW-015, CDW-014, CDW-003, CDW-020, CDW-002, CDW-007, CDW-019							
W	1		NA NA	0.9	0.90	0.00	0.9
Verification Sampling: No shallow samples collected							
W	1		NA NA	0.9	0.90	0.00	0.9
Characterization Sampling: Remove CDX-005, CDX-015, CDX-008, CDX-010, CDX-006, CDX-003, CDX-007, CDX-009, CDX-014							
X	11		Normal Not Log-Normal	1.7	0.89	0.44	1.1
Verification Sampling: No samples removed							
X	20		Normal Log-Normal	1.7	0.74	0.39	0.9
Characterization Sampling: Remove CDAA-007, CDAA-001&CDAA-011, CDAA-002, CDAA-003, CDAA-004, CDAA-010, CDAA-009, CDAA-008							
AA	2		NA NA	0.27	0.27	0.00	0.3
Verification Sampling: Remove AA-0B-02-DS-01							
AA	21		Normal Log-Normal	1.385	0.33	0.35	0.5
Characterization Sampling: Remove CDBB-001&CDBB-020, CDBB-012, CDBB-011, CDBB-007, CDBB-006, CDBB-003, CDBB-002, CDBB-008, CDBB-009, CDBB-010							
BB	9		Normal Log-Normal	1.53	0.92	0.40	1.2
Verification Sampling: Remove sample BB-OA-03-DS-01, BB-OA-03-DS-01-S, BB-OA-03-DS-01-S2							
BB	12		Normal Log-Normal	1.53	0.85	0.39	1.0
Characterization Sampling: Remove CDCC-012, CDCC-013, CDCC-004, CDCC-009, CDCC-017, CDCC-008, CDCC-002, CDCC-005, CDCC-011, CDCC-006, CDCC-007, CDCC-016, CDCC-010, CDCC-015							
CC	2		NA NA	1.07	1.07	0.00	1.1
Verification Sampling: No samples removed							
CC	14		Normal Log-Normal	1.07	0.38	0.35	0.5
Characterization Sampling: Remove CDDD-004, CDDD-005, CDDD-019							
DD	16		Not Normal Not Log-Normal	ND	---	---	---
Verification Sampling: Remove DD-OA-05-DS-01, DD-OA-01-DS-01, DD-OA-04-0S-01, DD-OA-01-DS-01-S							
DD	22		Not Normal Not Log-Normal	0.9	2.22	2.74	3.2
Notes: The statistical analysis was terminated if the maximum concentration on the Tier II Property was less than or equal to 1.0 mg/kg or the 95% UCL was less than or equal to 1.0 mg/kg. Verification data are draft and subject to validation							

Table 3
Statistical Analysis of Existing Surface and Deep Soil Data

Property	Number of Samples, n, Used in the Statistical Analysis	Function Distribution	Maximum Detected Concentration (mg/kg)	Mean Concentration (mg/kg)	Standard Deviation (mg/kg)	95% Upper Confidence Level of the Mean (mg/kg)
Characterization Sampling: Remove CDU0014, CDU010, CDU001&CDU020, CDU007, CDU006, CDU018, CDU009, CDU016, CDU008, CDU019, CDU013, CDU011, CDU015, CDU005, CDU012, CDU017, CDU002, CDU003						
U	1	NA	0.9	0.89	0.00	0.9
		NA				
Shallow Verification Sampling: No samples collected						
U	1	NA	0.9	0.89	0.00	0.9
		NA				
Verification Sampling: Remove U-OA-02-DS-02(D), U-OA-02-DS-03-S, U-OA-02-DS-04						
U	5	Normal	1.0375	0.82	0.16	1.0 ✓
		Log-Normal				
Characterization Sampling: Remove CDW018, CDW021, CDW017, CDW010, CDW008, CDW004, CDW011, CDW005, CDW009, CDW013, CDW-001&CDW-022, CDW-016, CDW-012, CDW-015, CDW-014, CDW-003, CDW-020, CDW-002, CDW-007, CDW-019						
W	1	NA	0.9	0.90	0.00	0.9
		NA				
Shallow Verification Sampling: No samples collected						
W	1	NA	0.9	0.9	0.0	0.9
		NA				
Verification Sampling: No samples removed						
W	4	Normal	0.9	0.38	0.35	0.8 ✓
		Log-Normal				
Characterization Sampling: Remove CDX-005, CDX-015, CDX-008, CDX-010, CDX-006, CDX-003, CDX-007, CDX-009, CDX-014 ✓						
X	11	Normal	1.7	0.89	0.44	1.1
		Not Log-Normal				
Shallow Verification Sampling: No samples removed						
X	20	Normal	1.7	0.74	0.39	0.9
		Log-Normal				
Verification Sampling: Remove X-OA-04-DS-02						
X	26 ✓	Not Normal	1.8 ✓	0.59 ✓	1.87 ✓	0.9 ✓
		Log-Normal				
Characterization Sampling: Remove CDAA-007, CDAA-001&CDAA-011, CDAA-002, CDAA-003, CDAA-004, CDAA-010, CDAA-009, CDAA-008						
AA	2	NA	0.27	0.16	0.16	0.9
		NA				
Shallow Verification Sampling: Remove AA-0B-02-DS-01						
AA	21	Normal	1.385	0.33	0.35	0.5
		Log-Normal				
Verification Sampling: Remove AA-0B-02-DS-01-S-FD, CDAA012						
AA	21	Normal	0.656	0.25	0.18	0.3 ✓
		Not Log-Normal				

Table 3
Statistical Analysis of Existing Surface and Deep Soil Data

Property	Number of Samples, n, Used in the Statistical Analysis	Function Distribution	Maximum Detected Concentration (mg/kg)	Mean Concentration (mg/kg)	Standard Deviation (mg/kg)	95% Upper Confidence Level of the Mean (mg/kg)
Characterization Sampling: Remove CDBB-001&CDBB-020, CDBB-012, CDBB-011, CDBB-007, CDBB-006, CDBB-003, CDBB-002, CDBB-008, CDBB-009, CDBB-010						
BB	9	Normal	1.53	0.92	0.40	1.2
		Log-Normal				
Shallow Verification Sampling: Remove sample BB-OA-03-DS-01, BB-OA-03-DS-01-S, BB-OA-03-DS-01-S2						
BB	12	Normal	1.53	0.85	0.39	1.0
		Log-Normal				
Verification Sampling: No samples removed						
BB	16	Normal	1.53	0.79	0.36	0.9 ✓
		Log-Normal				
Characterization Sampling: Remove CDCC-012, CDCC-013, CDCC-004, CDCC-009, CDCC-017, CDCC-008, CDCC-002, CDCC-005, CDCC-011, CDCC-006, CDCC-007, CDCC-016, CDCC-010, CDCC-015						
CC	2	NA	1.07	1.07	0.00	1.1
		NA				
Shallow Verification Sampling: No samples removed						
CC	14	Normal	1.07	0.38	0.35	0.5
		Log-Normal				
Verification Sampling: No samples removed						
CC	18	Normal	1.07	0.32	0.33	0.5 ✓
		Log-Normal				
Characterization Sampling: Remove CDDD-004, CDDD-005, CDDD-019						
DD	16	Not Normal	ND	--	--	--
		Not Log-Normal				
Shallow Verification Sampling: Remove DD-OA-05-DS-01, DD-OA-01-DS-01, DD-OA-04-0S-01, DD-OA-01-DS-01-S						
DD	22	Not Normal	0.9	2.22	2.74	3.2
		Not Log-Normal				
Verification Sampling: Remove DD-OA-05-DS-02, DD-OA-05-DS-03-S, DD-OA-05-DS-04, DD-OA-05-DS-05-S, DD-OA-05-DS-06-S, DD-OA-05-DS-07-S						
DD	29	Not Normal	0.91 ✓	5.58	12.70	0.4
		Log-Normal				
Notes: The statistical analysis was terminated if the maximum concentration on the Tier II Property was less than or equal to 1.0 mg/kg or the 95% UCL was less than or equal to 1.0 mg/kg. Verification data are draft and subject to validation						

Table 2-1
Summary of Verification Sampling Data
Reported in the Revised Removal Action Work Plan for Tier II Residential Properties

Property	Sample ID	Depth (inches)	Total PCB Concentration (mg/kg)
U	U-OA-02-DS-02(D)	6-12	6.0475
U	U-OA-02-DS-03-S	12-18	6.025
U	U-OA-01-DS-02	6-12	1.0375
U	U-OA-03-DS-02	6-12	0.809
U	U-OA-04-DS-02	6-12	0.5905
W	W-OA-02-DS-03	12-18	0.319 ✓
W	W-OA-01-DS-03	12-18	0.1795 ✓
W	W-OA-03-DS-03	12-18	0.1395 ✓
X	X-OA-04-DS-02	6-12	5.62
X	X-OA-04-DS-03-S	12-18	1.815
X	X-OA-05-DS-01(D)	0-6	0.83425
X	X-OA-12-DS-01	0-6	0.732
X	X-OA-06-DS-01	0-6	0.6915
X	X-OA-07-DS-01	0-6	0.662
X	X-OA-03-DS-02	6-12	0.63
X	X-OA-11-DS-01	0-6	0.5805
X	X-OA-02-DS-02	6-12	0.451
X	X-OA-08-DS-01	0-6	0.431
X	X-OA-13-DS-01	0-6	0.359
X	X-OA-09-DS-01	0-6	0.311
X	X-OA-10-DS-01	0-6	0.2805
X	X-OA-01-DS-02	6-12	0.1715
AA	AA-OA-01-DS-02	6-12	0.3995
AA	AA-OB-01-DS-02	6-12	0.36
BB	BB-OA-03-DS-01	0-6	1.68
BB	BB-OC-01-DS-02	6-12	0.94
BB	BB-OC-02-DS-01	0-6	0.865
BB	BB-OC-03-DS-01	0-6	0.699
BB	BB-OA-02-DS-02	6-12	0.589
BB	BB-OA-01-DS-02	6-12	0.459
BB	BB-OB-01-DS-02(D)	6-12	0.4095
BB	BB-OB-02-DS-01	0-6	0.3205
CC	CC-OA-05-DS-01	0-6	0.5905
CC	CC-OB-02-DS-01(D)	0-6	0.365
CC	CC-OA-04-DS-01	0-6	0.17
CC	CC-OA-03-DS-02	6-12	0.1395
CC	CC-OA-02-DS-02	6-12	0.0995
CC	CC-OB-01-DS-02	6-12	0.098
CC	CC-OA-01-DS-02	6-12	0.0925
DD	DD-OA-05-DS-01	0-6	74
DD	DD-OA-05-DS-02	6-12	17.15
DD	DD-OA-05-DS-03-S	12-18	9.9
DD	DD-OA-03-DS-01-S	0-6	4.3 U
DD	DD-OA-02-DS-01	0-6	4.1 U ✓
DD	DD-OA-01-DS-01	0-6	2.91
DD	DD-OA-04-DS-01	0-6	0.86 ✓
DD	DD-OA-02-DS-01-S	0-6	0.79
DD	DD-OA-03-DS-01	0-6	0.43 U ✓
DD	DD-OA-04-DS-02	6-12	0.28 ✓

Notes:

1. Total PCB concentration is the sum of the concentrations for Aroclor 1254 and 1260. For nondetect results 1/2 the detection limit was used to calculate the total.
2. Data are draft and are subject to validation
3. (D): The given value is an average of the sample and its field duplicate.